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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,006	10/12/2004	David Paul Yach	PUS1443 (1578.120)	9101

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EXAMINER

BIBBEE, JARED M

ART UNIT	PAPER NUMBER
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2161

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/776,006

Applicant(s)

YACH ET AL.

Examiner

Jared M. Bibbee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/24/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-20 are objected to because of the following informalities:

Many of the claim limitations are recited passively or optionally. Although the claims are being rejected using art, the applicant is reminded "[l]anguage that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." (See MPEP 2106 II. C.). The claims should be amended to remove limitations that could be interpreted optionally such as "said hash generator selectably for forming hash values" and "selectably sending first hash information from the mobile node to the network part".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to independent claims 1 and 15, the claims are rejected as falling under the judicial exception of an abstract idea which lacks a useful, concrete, and tangible result. A claimed series of steps or acts that do not result in a useful, concrete, and tangible result are not statutory within the meaning of 35 USC 101. In the instant case, the claims 1 and 15,

"_[determining]_" "[setting]_" "[measuring]_" "[establishing]_" or "[selecting]_"

However, no useful, concrete, and tangible result is claimed. For example, "writing said data,"

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"updating said data," "sending said data" being claimed at the end of the claim may comprise a useful, concrete, and tangible result. Absent such a result, however, the claims are not statutory.

Claims 2-14 and 16-20 are rejected because they contain the deficiencies of claims 1 and 15 respectively.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-14 are apparatus claims but contain no structure such as a processor, memory, etc. and therefore the claims are merely a process and not an apparatus and are rendered indefinite.

Claims 1, 4, 5, 8, 13, and 14 are recited passively or optionally. Although the claims are being rejected using art, the applicant is reminded "[l]anguage that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." (See MPEP 2106 II. C.). Therefore, the claims are rendered indefinite for failing to distinctly claim the invention. The claims should be amended to remove limitations that could be interpreted optionally such as "said hash generator selectably for forming hash values" and "selectably sending first hash information from the mobile node to the network part".

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Claims 2-3, 6-7, and 9-12 are rejected for being dependent upon claims 1, 4, 5, and 1 respectively.

Claims 1-20 use various formats for referring to the at least first database, including: "the first database", "the at least the first database", "the network-copy", and "the mobile-copy". One standard method should be used to refer to "at least the first database" throughout the claims so that it is clear what is being referred to and the claims remain definite.

Claim 6 recites the limitation "the network copy database" in line 8 and the limitation "the mobile copy database" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claims 7 and 8 are rejected for being dependent upon claim 6.

Claim 16 recites the limitation "the mobile copy database" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Yianilos et al (U.S. 2002/0029214 A1).

With respect to independent claim 1, Yianilos teaches an improvement of apparatus for facilitating determination of whether the first network copy database is in match with the first mobile copy database (i.e., *"FIG. 1 depicts a synchronizable database. On the left, the figure*

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depicts a car dealer's database, 1, that maintains a schedule of factory repairs. Each time a customer needs a factory repair, the dealer schedules it in his database. The factory, on the right, maintains a master schedule of repairs, 2. Periodically the two must be synchronized--in this case the new and changed orders must be copied from the dealer's site to the factory site and inserted into the factory's database. In order to rapidly identify the records to be transferred, the databases each support a special facility for efficient computation of a digest (hash) of any specified range of keys, which amounts to a summary of the range. This special facility corresponds to the invention's summarizable database abstraction. An efficient synchronizations facility then uses this smart summarization mechanism to minimize the amount of data that must be transferred." The preceding text excerpts clearly indicate that the system compares two remote databases to determine which records need to be synchronized. In order to identify the records that need to be synchronized, each database contains a facility for hashing a range of database records (i.e. Group Hashing). The Hashings are then compared to determine which records need to be synchronized. (see paragraphs [0013], [0025], [0062], and [0067])), said apparatus comprising: a group hash generator embodied at the mobile node and adapted to receive indications of at least selected portions of at least selected data records of the at least the first mobile copy, said group hash generator selectably for forming a group hash value formed of aggregated hash values aggregated from individual record hashes representative of at least a first selected group of the selected data records, the group hash values for communication to the network part to determine whether the first network copy database and the first mobile copy database are in match with one another (see paragraphs [0013], [0025], [0062], and [0067]).

With respect to dependent claim 2, Yianilos teaches further an individual record hash generator embodied at the mobile node, said individual record hash generator for generating the individual record hashes that are aggregated to form, by said group hash generator, the group hash value, the individual record hashes responsive to values of at least portions of the selected data records (see paragraphs [0062] and [0067]).

With respect to dependent claim 3, Yianilos teaches further an individual record hash buffer adapted to receive values representative of the individual record hashes formed by said individual record hash generator, said individual record hash buffer for buffering thereat the values representative of the individual record hashes (see paragraphs [0062] and [0067]).

With respect to dependent claim 4, Yianilos teaches further the individual record hashes formed by said individual record hash generator are further selectably for communication to the network part to determine whether the first network copy database and the first mobile copy database are in match with one another (see paragraphs [0067] and [0083]).

With respect to dependent claim 5, Yianilos teaches further the individual record hashes formed by said individual record hash generator are selectably communicated to the network part subsequent to communication of the group hash value to the network part (see paragraphs [0062] and [0067]).

With respect to dependent claim 6, Yianilos teaches further the individual record hashes formed by said individual record hash generator are communicated to the network part upon preliminary determination that the network copy database and the mobile copy database are out of match with one another responsive to analysis, at the network part, of the group hash value (see paragraphs [0062] and [0067]).

With respect to dependent claim 7, Yianilos teaches further the preliminary determination is performed at the network part and wherein said apparatus further comprises a detector for detecting indications of the preliminary determination made at the network part (see paragraphs [0062] and [0067]).

With respect to dependent claim 8, Yianilos teaches further an individual record hash buffer adapted to receive values representative of the individual record hashes formed by said individual record hash generator, said individual record hash buffer for buffering thereat the values representative of the individual record hashes, the values representative of the individual record hashes selectably retrieved from said buffer for communication to the network part (see paragraphs [0062] and [0067]).

With respect to dependent claim 9, Yianilos teaches further each group of the at least the first selected group is identified by a group identifier, the group identifier for communication to the network part together with the group hash value formed by said group hash generator (see paragraphs [0067] and [0069]).

With respect to dependent claim 10, Yianilos teaches further a message generator adapted to receive indications of the group hash value and the group identifier associated therewith, said message generator for forming a message formatted to include both the group hash value and the group identifier (see paragraphs [0062] and [0067]; Note that the summary that is created on both sides of the network is the message, which comprises the group hash keys and values that are to be compared.).

With respect to dependent claim 11, Yianilos teaches further a determiner adapted to receive values of the group hash formed by said group hash generator and communicated to the

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network part by the mobile node, said determiner for determining whether values of the group hash correspond with network generated values (see paragraphs [0062] and [0067]).

With respect to dependent claim 12, Yianilos teaches further a requester coupled to said determiner to receive indications of determinations made thereat, said requester selectable for requesting additional information associated with the at least the first mobile copy database (see paragraphs [0067]-[0072]).

With respect to dependent claim 13, Yianilos teaches further the additional information selectably requested by said requestor comprises values of the individual record hashes that are aggregated to form the group hash values (see paragraphs [0069]-[0071]).

With respect to dependent claim 14, Yianilos teaches further said determiner is further adapted to receive values of the individual record hashes selectably further communicated to the network part by the mobile node, said determiner further for determining whether values of the individual record hashes correspond with corresponding network generated values (see paragraphs [0067] and [0083]).

With respect to independent claim 15, Yianilos teaches an improvement of a method for facilitating determination of whether the first network copy database is in match with the first mobile copy database (i.e., *"FIG. 1 depicts a synchronizable database. On the left, the figure depicts a car dealer's database, 1, that maintains a schedule of factory repairs. Each time a customer needs a factory repair, the dealer schedules it in his database. The factory, on the right, maintains a master schedule of repairs, 2. Periodically the two must be synchronized--in this case the new and changed orders must be copied from the dealer's site to the factory site and inserted into the factory's database. In order to rapidly identify the records to be transferred,*

the databases each support a special facility for efficient computation of a digest (hash) of any specified range of keys, which amounts to a summary of the range. This special facility corresponds to the invention's summarizable database abstraction. An efficient synchronizations facility then uses this smart summarization mechanism to minimize the amount of data that must be transferred." The preceding text excerpts clearly indicate that the system compares two remote databases to determine which records need to be synchronized. In order to identify the records that need to be synchronized, each database contains a facility for hashing a range of database records (i.e. Group Hashing). The Hashings are then compared to determine which records need to be synchronized. (see paragraphs [0013], [0025], [0062], and [0067])), said method comprising: aggregating together individual record hashes of individual data records of at least a first selected group of data records of the at least the first mobile copy to form a group hash value (see paragraphs [0013], [0025], [0062], and [0067]); sending the group hash value formed during said operation of aggregating to the network part (see paragraphs [0013], [0025], [0062], and [0067]); comparing the group hash value sent to the network part during said operation of sending with a corresponding network generated value (see paragraphs [0013], [0025], [0062], and [0067]); and determining whether the group hash value corresponds in value with the corresponding network generated value (see paragraphs [0013], [0025], [0062], [0067] , and [0083]).

With respect to dependent claim 16, Yianilos teaches further the operation of concluding the first network copy database to be in match with the mobile copy database if the group hash value is determined during said operation of determining to correspond in value with the corresponding network generated value (see paragraphs [0062], [0067], and [0083]).

With respect to dependent claim 17, Yianilos teaches further the operation of requesting additional information if the group hash value is determined during said operation of determining not to correspond in value with the corresponding network generated value (see paragraphs [0069]-[0071]).

With respect to dependent claim 18, Yianilos teaches further the additional information requested during said operation of requesting comprises values of the individual record hashes that are aggregated together to form the group hash value (see paragraphs [0069]-[0071]).

With respect to dependent claim 19, Yianilos teaches further the operation of sending the values of the individual record hashes to the network part (see paragraph [0081]).

With respect to dependent claim 20, Yianilos teaches further the operation of comparing the individual record hashes, once delivered to the network part, with corresponding locally generated values (see paragraph [0083]).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Spaey (U.S. 2002/0059299 A1) is cited to teach a system and method for synchronizing databases.

Oberlander et al (U.S. 6,286,032 B1) is cited to teach a method and apparatus in a communication network for updating and maintaining record data.

Mau (U.S. 2004/0025072 A1) is cited to teach a method, system, and program for synchronizing data.

Boothby (U.S. 5,684,990) is cited to teach the synchronization of disparate databases.

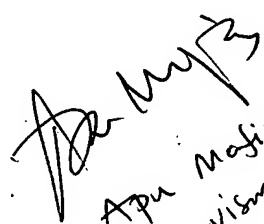
Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared M. Bibbee whose telephone number is 571-270-1054. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB



Apu Mofiz
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